IDRC FEATURE

A monthly features service about science, technology, and development

Approx.850 words

IDRC-F232e

THIRD WORLD NOW PART OF THE SPACE AGE

by Narinder Aggarwala

VIENNA, IDRC/DSS -- In the 20 years since the launching of Telstar 1, the first satellite to carry trans-Atlantic telephone conversations and television pictures, space technology has become an integral part of the international communications system. Space communication today involves some 150 countries and over 300 earth stations around the world - and the numbers are growing fast.

Over the years, while communications satellites have become larger, more complex, longer lasting and costlier. earth stations have become cheaper, smaller, and simpler. This "technology inversion" has enabled many developing countries to share the capacity of satellites jointly owned with other countries or to lease circuits from the global communications networks.

Communications satellites already are or will be used in national and regional telecommunications networks that developing countries are setting up with support from international agencies such as the United Nations Development Programme (UNDP) and the International Telecommunications Union (ITU).

Parked 22,300 miles above the earth in fixed orbits, communications satellites have forged links between distant landmasses. They provide a more reliable, more potent and cheaper alternative to traditional undersea cables and shortwave radio.

Advances in space technology have also reduced leasing costs for communications satellite channels. The use of satellites has also made telecommunications costs insensitive to distance. Partly as a result, the

INTERNATIONAL DEVELOPMENT RESEARCH CENTRE ● Communications Division, Box 8500, Ottawa, Canada, K1G 3H9
Telephone (613) 996-2321 ● Cable: RECENTRE ● Telex: 053-3753

developing nations' share in satellite communication traffic has gone from zero in 1965 to about 35 percent in 1981.

Nearly 100 developing countries now have satellite earth stations. At least two countries - India and Indonesia - have their own domestic communications satellites. Several others, such as Brazil and Argentina, are planning to have their own satellites in the near future. Arab states are scheduled to have a regional communications satellite (ARABSAT) in 1983. An African regional satellite (AFROSAT) is planned for the late 1980s.

Despite increased use of satellite communications by the developing countries, however, experts believe that the Third World cannot derive the full benefits of advances in space communications without reliable, modern national telecommunications systems on the ground. Few yet have such systems - the vast majority of people in developing countries lack access even to basic communications facilities. Telegraph and telephone cover primarily the urban areas, and even here the waiting time for installation of a telephone line can be as long as several years. Recognizing the key role of telecommunications in development and trade, as well as in advancing cultural, political and economic integration, many developing countries have been making efforts, with technical and other support from bilateral and multilateral sources, to build national, sub-regional and regional telecommunications networks, using satellites for cross-country transmissions.

Another anomaly in the existing global telecommunications system is that many developing countries cannot communicate directly with each other. For example, a call from Harare, Zimbabwe, to the capital of neighbouring Zambia has to be routed through London. Both the cost and the inconvenience are high - a major disincentive to contacts. Such colonially inherited routing gaps are now on the way to being closed through the organization of regional networks.

In Africa, UNDP and ITU are assisting in the creation of the Pan-African Telecommunications Network (PANAFTEL). Based on a survey of 38 countries, a detailed plan for a 20,000 km network of transmission routes has been completed

and is being implemented. Modern automatic international exchanges have been set up in 15 countries. PANAFTEL's objective is to enable Africans to call anywhere on their continent without having to go through Europe.

In the South Pacific, where wide stretches of water separate islands and nations with common cultures and needs, telecommunications is vital. This is particularly so in times of emergency and natural disaster, such as hurricanes or earthquakes. As part of the South Pacific Telecommunications Network, satellite earth stations have been set up to link the national networks of Fiji, Tonga and Samoa.

In Asia, UNDP and ITU are assisting in the creation of a 14-country Asian Telecommunications Network and advising on standardisation, international linkages, and adoption of new technologies. Satellite earth stations have been set up in most countries of the region. Indonesia's PALAPA II satellite also serves other members of the Association of Southeast Asian Nations (ASEAN) - Malaysia, Philippines, Singapore, and Thailand.

A significant step toward enabling the developing countries to join Western Europe, North America and Japan in the so-called "information age" is the introduction of uniform training techniques and standards. Nearly 80 developing countries are collaborating in a new training programme for middle and senior technical and management personnel. As part of the this global programme, training needs of all participating countries have been analysed and more than 600 course developers trained. These course developers, in turn, are helping to develop telecommunications training programs in their own countries.

-END-

January 1983